

FERNANDINA HARBOR, FLORIDA
103 EVALUATION
OCEAN DISPOSAL EVALUATION REPORT

1. Description of the Action. The work would consist of removing 621,000 cubic yards of sediment with a mechanical bucket dredge, transporting it by barge and placing it offshore in the Environmental Protection Agency (EPA) designated Ocean Dredged Material Disposal Site (ODMDS) for Fernandina, Florida.
2. Description of the Disposal Site. The site is located on the shallow continental shelf in water depths of 45 to 63 feet off northeast Florida. The site, which is about 4 nautical square miles in area, is located about 10 nautical miles southeast of the St. Marys River mouth and six nautical miles east of Amelia Island. Center coordinates of the ODMDS are 30° 32'N latitude and 81° 18'W longitude. The site and its full coordinates are depicted in figures A-2 and A-2A in appendix A to the accompanying Detailed Project Report.
3. Description of Material to be Dredged. Based on grab samples the majority of the material is a soft gray clay or gray clay mixed with sand. This material is not suitable for beach disposal.
4. Environmental Testing Results. Sediment and elutriate samples were collected from the project area in December 1989 and March 1991. The results of these samples were compared with results from earlier elutriate and bioassay evaluations. Concentrations of toxic chemicals in the 1989 sediment samples were below those found in previous bioassays that determined the material to be acceptable for ocean disposal. Also, elutriate sample results were within state standards except for mercury. However, the later samples collected and evaluated in 1991 showed that mercury would not be present at detectable levels or above State water quality standards during dredging. Therefore the material is determined to be acceptable for unrestricted ocean disposal. The data and results are also discussed in section 5.08, 5.09, 5.10, 6.05, and 6.06 of the Environmental Assessment, and in appendix E to the Environmental Assessment.

5. Need for Ocean Disposal.

a. Alternatives. Several alternatives to ocean disposal have been investigated. Upland disposal, beach disposal, nearshore disposal, and wetland creation were all considered; however, ocean disposal is the only practical alternative.

b. Selection rationale. Upland disposal is not feasible because sufficient amounts of land are unavailable and their use would be prohibitively costly, if available. The dredge area is bounded on the west by vast salt marshes or islands and on the east by the port facilities that need all available land for storage of containers and the City of Fernandina. Creating a disposal site on developable (upland) property would result in esthetic visual and odor degradation and loss of valuable property within the City of Fernandina. Drying the material and trucking it to a permanent site would create odor and esthetic problems during the drying process, require handling the material, and be more costly than ocean disposal. The material, which contains silt and clay and is a gray color, is not suitable for beach disposal. Use of the material for wetland creation is not desirable, since creation would require filling tidal areas. Ocean disposal was selected since it is the most cost effective plan, does not require property near the river or rehandling of the material, and can be completed within acceptable environmental standards.

6. Environmental Impacts.

a. Esthetics. A turbidity plume would be created upon release of the material. The plume would be localized and temporary.

b. Recreation resources. The ODMDS is located at least two nautical miles from all known fish havens, artificial reefs, and fishing areas. Recreation resources should not be affected.

c. Commercial marine resources. The main commercial fishery that may be present in the general area is for shrimp. White, brown, and pink shrimp are trawled in coastal waters 20-80 feet deep. Disposal of the material in the existing disposal site would not likely have measurable impacts on the area's commercial fishery.

d. Navigation. The disposal activity would not adversely affect navigation. The activity would not interfere with use of designated ship channels. The nearest anchorage is approximately 3 nautical miles southwest of the ODMDS.

e. Mineral resources. There are no known mineral resources

within the study area.

f. Water quality. Based on 1988, 1989, and 1991 elutriate samples and bioassays, water quality would not be significantly reduced. The data has been coordinated with the State and water quality certification issued.

g. Archeological and cultural resources. Disposal at the site would not adversely affect any archeological or cultural resources.

h. Endangered and threatened species. Listed species under the jurisdiction of the National Marine Fisheries Service (NMFS) that could occur in the project area and that might be affected by the proposed action include;

Eubalaena glacialis, the endangered right whale;
Caretta caretta, the threatened loggerhead turtle;
Chelonia mydas, the endangered/threatened green turtle;
Lepidochelys kempi, the endangered Kemp's ridley turtle.

Green turtles in U.S. waters are listed as threatened, except for the Florida breeding population, which is listed as endangered.

The following protected species are under the jurisdiction of the Fish and Wildlife Service (FWS).

Trichechus manatus, the endangered West Indian manatee;
Mycteria americana, the endangered wood stork;

Additional protected species that may occur along the Florida/Georgia coast include;

Balaenoptera physalus, the finback whale;
Megaptera noveaeangliae, the humpback whale;
Balaenoptera borealis, the sei whale;
Eretmochelys imbricata, the hawksbill turtle;
Dermochelys coriacea, the leatherback turtle;
Acipenser brevirostrum, the shortnose sturgeon.

Endangered Species Act, Section 7, coordination with FWS and NMFS has been completed as noted in the Environmental Assessment. The work as proposed should not adversely affect protected species. Specific precautionary measures to protect manatees would be required of all contractors performing work on the project.

7. Determination and Findings. The project files, Environmental Assessment, and Ocean Disposal Evaluation Report have been reviewed. The proposed ocean disposal will present:

a. No unacceptable adverse effects on human health and no

significant damage to the resources of the marine environment;

b. No unacceptable adverse effects on the marine ecosystem;

c. No unacceptable adverse persistent or permanent effects due to the dumping of particular volumes or concentrations of these materials; and

d. No unacceptable adverse effects on the ocean for other uses as a result of direct environmental input.

The activity is in the overall public interest and should be implemented.

INDEX

—A—

aesthetics, 12, 18
Aesthetics, 30, 32
Affected Environment, 4, 8
Air Quality, 21, 38
Alternative, 4, 5, 8, 32
Alternatives, iv, 5, 8, 13, 18
ALTERNATIVES, 4
Alternatives Considered, iv
alternatives eliminated from detailed analysis, 5
Archeological, 21, 35
areas to be dredged, 8
Artificial Reef, 23, 36

—B—

beach disposal sites, 9, 28
BEACH PLACEMENT, 5
Benthic, 36
benthos, 11, 16
Birds, 23

—C—

Clean Water Act, 21, 23, 33
Coastal Barrier Resources, 22
COASTAL ZONE MANAGEMENT CONSISTENCY,
34
COMMENTS RECEIVED, 25
commercial navigation, 12
COMPARISON OF ALTERNATIVES, 5
Consultation, 21
Coordination, 21
County, 35
cultural resources, 12, 17
CUMULATIVE IMPACTS, 18

—D—

Decision to be made, 1
Disposal Sites, 13, 17
dredging alternative, 13, 16, 17, 18
Dredging alternative, 4
Dunes, 36

—E—

EA, 23, 24
Economic, 36
economics, 12, 18

Effect, 21, 35, 37
Endangered, 20, 21, 31, 33
Enhance, 37
Environmental Assessment, 1, 20
Environmental Commitments, 19
ENVIRONMENTAL EFFECTS, 13
Erosion, 39
essential fish habitat, 16
ESSENTIAL FISH HABITAT, 11

—F—

Federal, 22, 35
Fish, 23, 33, 35
Fish and Wildlife, 21

—G—

GENERAL ENVIRONMENTAL SETTING, 8

—H—

Habitat, 33, 37
Hazardous, 38
Historic, 21, 32, 36
Historic Preservation, 21, 36
HISTORIC PROPERTIES, 12

—I—

Impact, 17, 18, 36, 37, 38
Infrastructure, 35
introduction, 1, 8, 13
IRREVERSIBLE AND IRRETRIEVABLE
COMMITMENT OF RESOURCES, 19

—L—

LIST OF PREPARERS, 24
LIST OF REVIEWERS, 24
Location, 27, 28

—M—

manatees, 10
Manatees, 14
methodology, 2
Mitigation, 35

—N—

National Environmental Policy Act, 20

National Marine Fisheries Service, 22
navigation (COMMERCIAL AND MILITARY, 18
NEARSHORE DISPOSAL, 4
nearshore disposal site, 9, 28
nepa documentation, 2
no-action alternative, 4, 13, 16, 17, 18
no-action alternative, 17
Nourishment, 23, 36

—O—

OCEAN DISPOSAL, 4
ocean dredged material disposal site (odm), 8
Oil, 38

—P—

PERMITS, LICENSES, AND ENTITLEMENTS, 2
PERTINENT CORRESPONDENCE, 40
Petroleum, 38
Physical Effects, 29
Preservation, 21, 35, 36
PROJECT NEED OR OPPORTUNITY, 1
PROJECT PURPOSE AND NEED, 1
Public Hearing, 21, 23
PUBLIC INVOLVEMENT, 24
Purpose, 27

—R—

recreation, 12, 17
Recreation, 22, 32, 36
Reef, 23, 36
Renourishment, 38
Resources, 8, 19, 22, 35, 36, 37, 38, 39
Response, 21

—S—

Safety, 35
SCOPING AND ISSUES, 2
sea turtles, 10, 15

SECTION 103 EVALUATION, 41
Section 404, 21, 23
SECTION 404(B) EVALUATION, 26
sediment analysis, 10
shortnose sturgeon, 15
Shortnose sturgeon, 11
SHPO, 21, 36
SOCIO-ECONOMIC, 18
Solid Waste, 38
State, 21, 22, 33, 35, 36, 38
State Historic Preservation, 21, 36
Summary, iv, 6

—T—

Threatened, 31
Threatened and endangered species, 14
THREATENED AND ENDANGERED SPECIES, 10
Transfer, 37

—U—

U.S. Fish and Wildlife Service, 21
UNAVOIDABLE ADVERSE ENVIRONMENTAL
EFFECTS, 19
Unique, 22, 36

—W—

Water column analysis, 9
water quality, 13
Water Quality, 9
Water Quality Certification, 38
Water Resources, 37
water use classification, 9
whales, 15
WHALES, 10
Wildlife, 33, 35
wildlife resources (other than threatened and endangered
species, 11, 16